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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference O0304PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. <b>PCT/KR2003/000837</b>	International filing date (day/month/year) <b>25 APRIL 2003 (25.04.2003)</b>	Priority date (day/month/year) 31 OCTOBER 2002 (31.10.2002)
International Patent Classification (IPC) or national classification and IPC <b>IPC7 G06K 19/077</b>		
Applicant <b>3B SYSTEM, INC. et al</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.
<input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
These annexes consist of a total of _____ sheets.
3. This report contains indications relating to the following items:
I <input checked="" type="checkbox"/> Basis of the report
II <input type="checkbox"/> Priority
III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
IV <input type="checkbox"/> Lack of unity of invention
V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
VI <input type="checkbox"/> Certain documents cited
VII <input type="checkbox"/> Certain defects in the international application
VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand <b>05 JUNE 2003 (05.06.2003)</b>	Date of completion of this report <b>28 JANUARY 2005 (28.01.2005)</b>
Name and mailing address of the IPEA/KR Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea	Authorized officer LEE, Dong Young Telephone No. 82-42-472-7140
Facsimile No. 82-42-472-7140	

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/000837

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

 the international application as originally filed the description:pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_ the claims:pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement) under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_ the drawings:pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_ the sequence listing part of the description:pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

 contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4.  The amendments have resulted in the cancellation of: the description, pages \_\_\_\_\_ the claims, Nos. \_\_\_\_\_ the drawings, sheets \_\_\_\_\_5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed," and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	1-4	YES
	Claims	None	NO
Inventive step (IS)	Claims	4	YES
	Claims	1-3	NO
Industrial applicability (IA)	Claims	1-4	YES
	Claims	None	NO

**2. Citations and explanations (Rule 70.7)**

Reference is made to the following documents:

D1: KR 2002-0022081 (23 March 2002)

D2: KR 2000-0075577 (15 December 2000)

**1. Novelty**

The subject matter of claims 1-4 is novel over the available prior art (Article 33(2) PCT).

**2. Inventive Step**

1) Claim 1 of the present application claims a smart card comprising three or less lines of an antenna terminal portion so as to minimize an overlapped portion of the antenna terminal portion and a chip on board (COB) for minimizing a capacitance value COUNT of the smart card.

Claim 2 claims the smart card according to claim 1, wherein the antenna terminal portion has one line so as to minimize the overlapped portion of the antenna terminal portion and the COB, which is welded or soldered for electrical connection between the COB and the antenna terminal portion.

Claim 3 claims the smart card according to claim 1, wherein a width of a connection pad of the COB is 1.2mm or less.

D1 discloses a combination-type IC card for assuring an electric connection by forming a contact terminal portion of an antenna in a form of straight line (see Fig. 8).

D2 discloses a method for manufacturing a smart card, characterized in that chip contact areas (25, 26) are arranged to have the same distance therebetween as the distance between antenna terminal portions (12, 14), so as to solder the chip contact areas (25, 26) and the antenna terminal portions (12, 14).

(Continued on Supplemental Sheet.)

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

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**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of:

Box V.

It would be obvious to a person skilled in the art to derive the invention claimed in claim 1 from the antenna connection terminal portion of D1; it would also be obvious to a person skilled in the art to derive the inventions claimed in claims 2 and 3 from the combination of the antenna connection terminal portion of D1 and the soldering of D2. Therefore, claims 1-3 are considered to lack an inventive step in view of the combination of D1 and D2.

2) Claim 4 meets the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest a method of performing a laminating process after the connection of a COB with an antenna.

**3. Industrial Applicability**

Claims 1-4 are considered to be industrially applicable.